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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
|-----------------|-------------|----------------------|---------------------|
| 09/634,099      | 08/08/00    | JOANNOPOULOS         | J MIT7953CON        |

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EXAMINER

WINSTEDT, J

ART UNIT

PAPER NUMBER

2872

DATE MAILED:

06/19/01

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

**Notice of Abandonment**

Application No.

09/634,099

Examiner

Jennifer E Winstedt

Applicant(s)

JOANNOPOULOS ET AL.

Art Unit

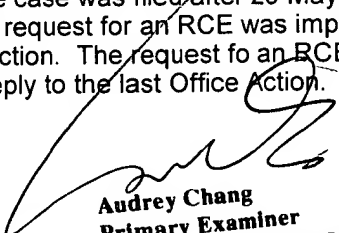
2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

This application is abandoned in view of:

1. ☐ Applicant's failure to timely file a proper reply to the Office letter mailed on \_\_\_\_\_.
  - (a) ☐ A reply was received on \_\_\_\_\_ (with a Certificate of Mailing or Transmission dated \_\_\_\_\_), which is after the expiration of the period for reply (including a total extension of time of \_\_\_\_\_ month(s)) which expired on \_\_\_\_\_.
  - (b) ☐ A proposed reply was received on \_\_\_\_\_, but it does not constitute a proper reply under 37 CFR 1.113 (a) to the final rejection.  
(A proper reply under 37 CFR 1.113 to a final rejection consists only of: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114).
  - (c) ☐ No reply has been received.
2. ☐ Applicant's failure to timely pay the required issue fee and publication fee, if applicable, within the statutory period of three months from the mailing date of the Notice of Allowance (PTOL-85).
  - (a) ☐ The issue fee and publication fee, if applicable, was received on \_\_\_\_\_ (with a Certificate of Mailing or Transmission dated \_\_\_\_\_), which is after the expiration of the statutory period for payment of the issue fee (and publication fee) set in the Notice of Allowance.
  - (b) ☐ The submitted fee of \$\_\_\_\_\_ is insufficient. A balance of \$\_\_\_\_\_ is due.  
The issue fee required by 37 CFR 1.18 is \$\_\_\_\_\_. The publication fee, if required by 37 CFR 1.18(d), is \$\_\_\_\_\_.
  - (c) ☐ The issue fee and publication fee, if applicable, has not been received.
3. ☐ Applicant's failure to timely file new formal drawings as required by, and within the three-month period set in, the Notice of Allowability (PTO-37).
  - (a) ☐ Proposed new formal drawings were received on \_\_\_\_\_ (with a Certificate of Mailing or Transmission dated \_\_\_\_\_), which is after the expiration of the period for reply.
  - (b) ☐ The proposed new formal drawings filed on \_\_\_\_\_ are not acceptable and the period for reply has expired.
  - (c) ☐ No proposed new formal drawings have been received.
4. ☐ The letter of express abandonment which is signed by the attorney or agent of record, the assignee of the entire interest, or all of the applicants.
5. ☐ The letter of express abandonment which is signed by an attorney or agent (acting in a representative capacity under 37 CFR 1.34(a)) upon the filing of a continuing application.
6. ☐ The decision by the Board of Patent Appeals and Interference rendered on \_\_\_\_\_ and because the period for seeking court review of the decision has expired and there are no allowed claims.
7. ☒ The reason(s) below:

The applicant submitted a request for a CPA, however since the case was filed after 29 May 2000 the CPA was treated as an RCE. The case is being abandoned because the request for an RCE was improper and it has been more than six months since the mailing date of the last Office Action. The request for an RCE was improper because the case is not after final or on appeal and it did not include a reply to the last Office Action. The applicant is advised that he can petition to revive the case if he so chooses.

  
Audrey Chang  
Primary Examiner  
Technology Center 2800

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## DETAILED ACTION

### *Priority*

1. Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 120 as follows:

An application in which the benefits of an earlier application are desired must contain a specific reference to the prior application(s) in the first sentence of the specification (37 CFR 1.78).

### *Drawings*

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: B. Correction is required.

### *Specification*

3. The disclosure is objected to because of the following informalities:  
page 2, line 18, "a of producing" should be "a method of producing";  
page 5, line 1, "refractive indices" should be "thicknesses"; and  
page 13, line 2, "ambient medium" should be "normal-incidence bandgap".

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Appropriate correction is required.

***Claim Objections***

4. Claim 40 is objected to because of the following informalities:
- in line 5, of the claim, " surface said surface" should be "surface, said surface"; and
- in lines 8 and 10 of the claim, "EM energy" should be "electromagnetic energy".

Appropriate correction is required.

***Claim Rejections - 35 U.S.C. § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 2, 6, 9, 15, 19, 22, 28, 32 and 35 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 2, "a range of maximum frequencies" in line 1 of the claim is confusing. A range of frequencies in step iii) has already been recited. It is uncertain whether or not the range of frequencies recited in line 1 of the claim is the same as the range of frequencies already recited in step iii). To overcome this, it is suggested that claim 2 be reworded as "... wherein in step iii) said range of frequencies comprises a range of maximum frequencies ...".

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Claim 6 recites the limitation "said periodic structure" in line 1 of the claim. There is insufficient antecedent basis for this limitation in the claim. This can be overcome by making claim 6 dependent on claim 5 instead of claim 4.

Claim 9 recites the limitation "the zone" in line 1 of the claim. There is insufficient antecedent basis for this limitation in the claim. Also, the variables in the equations found in claim 9 are not defined. Any and all variables found in an equation located in a claim must be defined in that claim or in a claim the claim with the equation is dependent on.

In claim 15, "a range of maximum frequencies" in line 1 of the claim is confusing. A range of frequencies in item iii) has already been recited. It is uncertain whether or not the range of frequencies recited in line 1 of the claim is the same as the range of frequencies already recited in item iii). To overcome this, it is suggested that claim 15 be reworded as "... wherein in item iii) said range of frequencies comprises a range of maximum frequencies ...".

Claim 19 recites the limitation "said periodic structure" in line 1 of the claim. There is insufficient antecedent basis for this limitation in the claim. This can be overcome by making claim 19 dependent on claim 18 instead of claim 17.

Claim 22 recites the limitation "the zone" in line 1 of the claim. There is insufficient antecedent basis for this limitation in the claim. Also, the variables in the equations found in claim 22 are not defined. Any and all variables found in an equation located in a claim must be defined in that claim or in a claim the claim with the equation is dependent on.

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In claim 28, "a range of maximum frequencies" in line 1 of the claim is confusing. A range of frequencies in item iii) has already been recited. It is uncertain whether or not the range of frequencies recited in line 1 of the claim is the same as the range of frequencies already recited in item iii). To overcome this, it is suggested that claim 22 be reworded as "... wherein in item iii) said range of frequencies comprises a range of maximum frequencies...".

Claim 32 recites the limitation "said periodic structure" in line 1 of the claim. There is insufficient antecedent basis for this limitation in the claim. This can be overcome by making claim 32 dependent on 31 instead of on 30.

Claim 35 recites the limitation "the zone" in line 1 of the claim. There is insufficient antecedent basis for this limitation in the claim. Also, the variables in the equations found in claim 35 are not defined. Any and all variables found in an equation located in a claim must be defined in that claim or in a claim the claim with the equation is dependent on.

### ***Double Patenting***

7. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

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8. Claims 1-44 are rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-44 of prior U.S. Patent No. 6130780. This is a double patenting rejection.

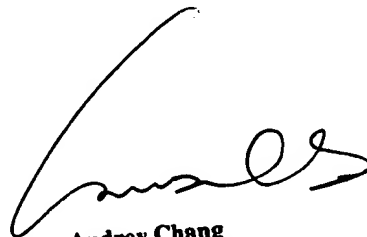
***Conclusion***

9. Any inquiry concerning the merits of this communication or earlier communications from the examiner should be directed to Jennifer Winstedt whose telephone number is (703) 305-0577. The fax number for the Group is (703) 308-7722 or 7724.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

JW

October 18, 2000



**Audrey Chang  
Primary Examiner  
Technology Center 2800**